

THE LOGGER'S BARK

1916 - RADIO CLUB OF TACOMA - 2016

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W7DK/100 Report by former WN7BDJ, Cub Reporter

Tacoma, RCT Clubhouse, Sunday, October 9, 2016.... The DK/100 station was opened up at 11:00 AM to continue our club's On The Air Centennial Celebration by making QSOs and telling the hams out in the ether about our club being 100 years old.



Mike W7XTZ at the PC logs for Bud K7BUD operating W7DK/100

Earlier that week... A BOLO (be on the lookout) was posted on the Straight Key Century Club Yahoo Group which told that W7DK/100 (SKCC member# 2599C) would be operating on 20 Meter CW At 11:00 in the SKCC Sprint-A-Thon on the air event. Rich KR7W, Mike W7MWF, and Mike W7XTZ manned W7DK/100/CW. Many SKCC members lined up on 14.052 MHz to make contact with DK/100.

At Noon the SSB folks took over the station for a couple of hours. Longtime member Bud K7BUD sat down, tuned up the KW Linear Amp, and called CQ. This reporter was next door in the Museum room

where I could hear the pile-up of hams waiting in line to talk with DK/100. Kudos to Bud—who has the gift of making a friendly QSO—with ham after ham after ham. Almost every ham that Bud talked to wished W7DK a happy 100th birthday. I thought it was great to listen in on.



DID YOU KNOW?

Beginning in the 1930s... Military and Civilian Pilots were required to know Morse Code.

UPCOMING NOTABLE CLUB ACTIVITIES



10/26, Weds 7:00 PM W7DK/100 On the Air Nite
10/29, Sat 10:00 AM Clubhouse **Mini Swap Meet**
and Chili Dog with Onions Feast
11/2, Weds, 7:00 PM Club Officers Board Meeting
11/8, Tues, 7:00 PM, VE Testing at Clubhouse
11/9, Weds, 7:30 PM Club Meeting at PC Library
Club Elections- See w7dk.org for more details....
11/23, Weds, 7:00 PM 4th Weds Activity Nite
See w7dk.org for more details....

GREAT CAESAR'S GHOST

BY RICH KR7W - BARK EDITOR

Latest Survey: Bark readers up from 9 to 11.

On a recent Saturday at the Clubhouse- a person expressed an interest about the history of **Morse Code**. I nosey-ed into the conversation and provided my theories.

Sam Morse gets all of the credit for what quickly evolved into American Morse, aka Railroad Morse; but it's my opinion that 90 percent of the credit should go to Alfred Vail, a machinist and inventor who added letters and special characters to Sam's numbers only code scheme. Sam's idea was to have coded numbers sent over the wire at the receiving station- the current would operate a magnetic arm that pushed a stylus into a moving paper tape. The operator would look at the tape and decipher the numbers into the message from a 'look up' table in a book. Since the magnetic arm made a unique sound for each numbered character- the operator who could hear the stylus moving could decipher the character in their head and write it down. The magnetic stylus evolved into the magnetic sounder that Click Clacks in a small box to reflect and amplify the sound. Alfred was responsible for this advancement.

When spark-gap wireless was invented- the Click-Clack sounder wouldn't work because there are no wires to cause current flow to operate the arm. Vail's code was changed a bit to allow for all characters to be sent using long (dah) and short (dit) bursts of spark energy which ended up sounding like long and short bursts of noise at the receiver. 16 original railroad Morse characters could be used for radio transmissions.

Back to Vail; Alfred walked away from the Morse code industry in 1848 because Sam

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got all of the credit and fame and big bucks. Alfred felt he wasn't appreciated.

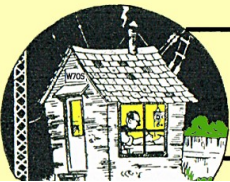
Are you interested to learn Morse Code to be able to make QSOs using Amateur Radio? If so, here's what I am thinking:

I have a desire to host a 6 Week (once a week on a weekday evening) **Morse Code Study Group** at the Clubhouse. What is a Study Group? Like in high school or college - it's a group of people who regularly meet to study a particular subject- which promotes enhanced learning, support and sometimes a bit of competition. The group members learn from each other as they share unique insights of the subject of learning Ham Radio Morse Code.

This will not be a class because I can not teach you Morse Code- it's up to you. Me as a SG member, can assist you with learning methods, key, keyer, and other equipment that I am fond of.

Ideally I'd like to entertain 6 to 8 members for this Study Group. If you are a newbie or already know Morse code at some level and want to contribute- please let me know. If enough folks commit then I will set a start date 599kr7w@gmail.com in November. Also, see me at Saturdays at the clubhouse to discuss.

73 Rich KR7W.



HAMSHACKs OF THE MONTH

BY CONTRIBUTING MEMBERS

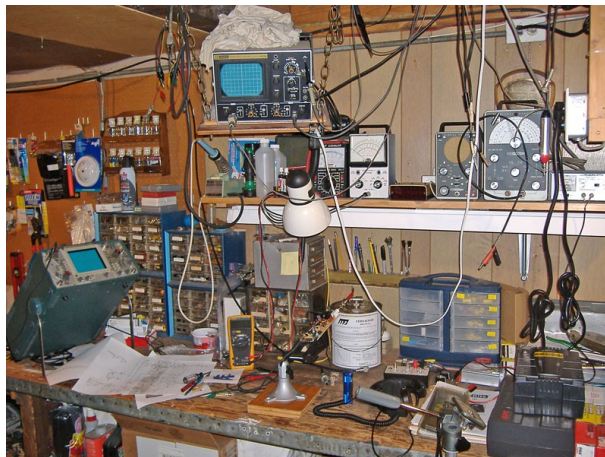


Randy WB4SPB's ham shack is located in an upper floor, bedroom closet. Randy explains that the radio is a Kenwood TS-120S, the gray box is a WB4VVF Accukeyer (QST Aug 1973), which he did not build but has modified slightly to use reed-relay keying. The paddle is a single-lever Vibroplex standard, the bug is a 1935 Stewart Johnson Speed-X (purchased broken from the estate of Allen Davis W4CZN SK who was a grand OM of the Georgia State Net in the 1970s and a role model for me, repaired a few years ago

by club member Pete KK7QW). The straight key is a Lionel J-38. The tuner (opposite from desk next to window) is a Johnson Junior Matchbox (actually Nye Viking, but same components), feeding a 135ft sloping doublet via window line.



Randy WB4SPB's secondary basement station consists Drake 4 line with Hallicrafters HA-1 keyer and Johnson TR switch, connected via a Johnson Junior Matchbox to a 65ft inverted vee doublet fed with window line. On the upper shelf is an old Ten Tec Century 21 and the Drake Speaker-Power Supply combo.



Randy's Workbench / Lab shows a Super Rockmite 51 he is trying to get working. Lots of Heathkit test equipment and a TEKtronics Oscilloscope. It looks like the very QRP powered Rockmite rig is connected to the 1KW Antenna Dummy Load.



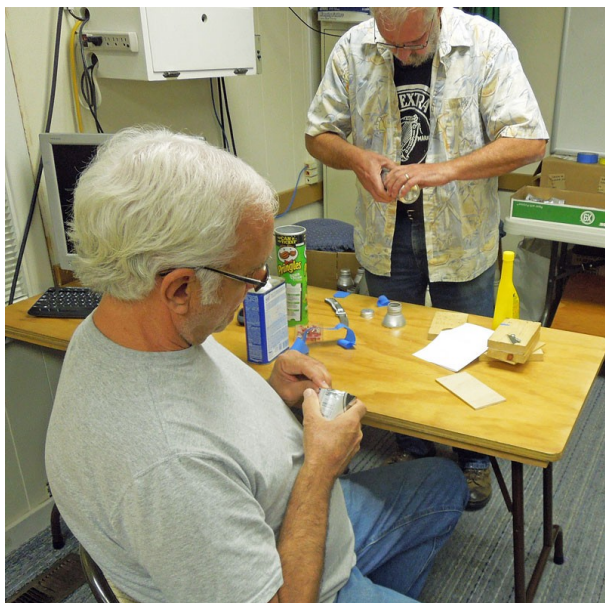
AROUND THE CLUBHOUSE

PAST, PRESENT & FUTURE INFO



At the September 28th **4th Wednesday Activity Night** (aka 4WAN) at the Clubhouse each participant participated in a "Hands On" exercise. With host, Mike W7MWF's instructions we built a small alcohol stove from a Coors Light beer can.

Mike said, (not exactly, but close enough)... "Folks are asking for a hands on activity... this is it. This stove could be used on a Summits On The Air outing to make a cup-a-tea, or heat your beans while out backpacking, or just for the fun of it. "



Chuck AC7QN in foreground bending the lip of the cut beer can. Instructor **Mike W7MWF** is behind the table. The wood block on the table is a cutting jig.

Mike guided us through how to cut here, bend it this-a-way, push all the way down, crimp the edges over, take outside, add some denatured alcohol fuel, and light it up with a BBQ lighter.



The Fruits of our Labors. Flames jet out holes—made with a push pin—around the tip rim of the beer can stove. The stove I built ran about 5-6 minutes on a jigger of De-Natured alcohol. Note that some kind of rack or some rocks piled up are needed to place your can of beans or teapot over the flame. This was a fun class at 4WAN.

Club Meeting News- South Hill, Library Service Center, RCT Club Meeting, October 12....

With contributions from Larry KD4VOM, Bob Dolhanyk KG7UAI, Training Director of the Pierce County Office of Emergency Management presented an interesting and informative review of the Cascadia Rising emergency response exercise held in June. He expressed appreciation for the participation of Amateur Radio and ARES members, and congratulated them on a job well done. He also presented certificates of appreciation to Pierce County ARES and to Stan K7DKK. He noted that ARES will be included in future planning and operational activities of the Pierce County Office of Emergency Management. Larry called out Armin N7JAJ Keen, Peter Baker AD7EU, and Linda Adams AB7YL for their outstanding participation in the Cascadia exercise.

Before the program began... Club Vice Prez Mike W7XTZ and Club Secretary of State Mike W7MWF presented a handsome award plaque, a framed certificate to long time club member **Larry KD4VOM**. Larry was recognized by the Club Officers, Directors, and Members for his decades of service. In addition Larry was awarded a Lifetime Honorary Membership in the Radio Club of Tacoma. Thank you Larry for all that you do.



Hats off to Life Time Member Larry KD4VOM.
L-R Sec Mike W7MFW, Veep Mike W7XTZ, Larry KD4VOM.

Museum Heat Restored... RCT Clubhouse Museum, October 13

Club Handyman Bruce WE7P and Rich KR7W installed a repurposed (not from the Free Table) heavy duty baseboard heater with high temperature shutoff in the W7OS Museum to replace the old unreliable unit. A heavy-duty thermostat was installed on the opposite wall along with approx 75 ft of Romex wire to the clubhouse electrical panel. This properly working heating system will eliminate turning the heat on and off at the AC breaker panel.

HF Room Lights Crap Out... RCT Clubhouse HF Station "Jerry Room", Oct 14

Saturday, Oct 8 hams in front of the Icom Pro 3 radio, listening to stations on 20 Meter SSB noticed a huge amount of noise from the speaker as well as high noise on the radios spectrum monitor display. While wondering what was causing the noise... someone looked up and noticed a small electrical fire sparking away inside of one the over head eight foot fluorescent tubes.

The light switch was promptly shut off and the noise disappeared.

The HF room has two 8 foot dual fluorescent light fixtures. A couple of years ago the fixture closest to the door stopped working. Station operators relied on the remaining fixture. A month or so ago another bulb burnt out which left the bulb that caught fire. After finishing up with the Museum heat work... handyman Bruce and Rich removed all of the fluorescent tubes from both fixtures. The fixtures were opened up, the house wires unconnected, and one Edison bulb fixture was temporarily installed on each fixture. Two Edison base CFL lamps on the ceiling now illuminate the HF Station Room... which sort of looks like Rhoda's flat in the Bronx back in 1974.

A LED lighting retrofit solution has been presented to the club managers for discussion and then hopefully approval.

More Clubhouse News on Page 11.

'Tis Election Season! (but you knew that...) by Randy WB4SPB

At Radio Club of Tacoma, there are no "off years". Our Officer and Board member terms are staggered so that about half of these positions open each year.

This year we will elect a President, a Treasurer and two Board members, each for a two-year term. The candidates are pictured below, along with introductory information that they have supplied. None are incumbents, so this election will result in the introduction of several fresh faces to the leadership of RCT.

The Club's bylaws (link: http://w7dk.org/images/rct_pdf/rct_bylaws_2015.pdf) prescribe, in Section Four, that the remainder of the election process this year will occur as follows:

Ballots will be mailed to voting members by October 20.

You will indicate your choices on the ballot for a President, a Secretary and two Board members. Ballots must be returned either:

By mail, postmarked on or before November 5, or

By personal delivery to the Secretary (Mike Finnie W7MWF) prior to the start of the annual meeting on November 9. "Personal delivery" may be accomplished either "in person" (up to and including at the meeting location before the call to order) or by placing your sealed ballot envelope in the Secretary's cubby hole in the anteroom area (near the front door) of the Clubhouse before November 9.

Ballots will be tallied and results announced at the annual meeting on November 9. Officers must receive a majority of votes. Board members need only a plurality.

Disputes and ties have not occurred in recent memory, but the Bylaws (see link above) provides for the resolution of these eventualities should they arise.

The Nomination Committee thanks you for participating in the governance of the Radio Club of Tacoma.

Greta KF7KSW


Joe K7ZG

Randy WB4SPB




Candidates for President**Dave Ellison W7UUU**

I became a ham in 1974 and joined the RCT shortly thereafter. I've been active continuously since, in CW, contests and DXing. I've long had a policy of Elmering new hams any chance I get, and have carried this practice over to my years with the club. I've been the RCT Program Coordinator for the last few years, always attempting to craft programs and topics to try to bring more folks in. As President, I will strive to continue the attitude of welcoming new members, and fostering interest in all the aspects of Amateur Radio and the Radio Club, to do my small part to seal the future of our organization for years to come.

Candidates for Treasurer

	<p>Steve Dightman AF7YD</p> <p>In returning to the Radio Club of Tacoma, from my years of pursuing business interests, I am delighted to see the high level of volunteer participation at W7DK. Yes, there could be more!; but I see a healthy Radio Club of Tacoma, also in need of a Treasurer. In asking myself, "what else is needed at DK?-- that I could help out with", Treasurer was the echo. So I am running for RCT Treasurer. Experience: Electronics Research & Development; Large and Small Company Business Operations Management; President of APICS Puget Sound Chapter (a not-for-profit professional organization, ~400 WA-Members) for 10 Years.</p>
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Candidates for Board of Directors (two positions)

	<p>Adam Barbera W2NCC</p> <p>As a Board member I would like the opportunity to bring new ideas to the Radio Club of Tacoma. My ham radio experiences started 17 years ago. I have been the vice president of the Olympia Amateur Radio Society for two years. Also I have been the Field Day coordinator for the Olympia radio club 4 consecutive years.</p>
	<p>Bruce (Red) Cranefield WB7EC</p> <p>I've been active in RCT since Nov 2012 and was first licensed in the late 1950's. My background is electronics maintenance - 26 years USAF and 25 years supporting FAA installations. Now fully retired, I want to devote more time to our radio club. I am at the Clubhouse most weekends and attend many of the Club's activities. I helped install the antenna patch panel and spend many hours with the Property Management team. I helped create the Centennial patch for Club members to vote on. I request your vote to be a Director of RCT, and I hope to make our club into a friendlier place for all hams to gather and enjoy our hobby of Amateur Radio.</p>
	<p>Phil Pia K7PIA</p> <p>Licensed since 2009, I am an active, 25-year-old, Extra Class ham who enjoys being on-the-air and serving with organizations such as RCT, the Mike and Key Club and Pierce County ARES. I am a frequent and enthusiastic participant in Club events such as Saturdays at the Clubhouse, contests, nets, meetings, and as a Volunteer Examiner. I immensely enjoy getting to know my fellow amateurs face-to-face, learning from their experience and lending a helping hand. I offer a youthful, energetic perspective along with radio club officer experience as the current Secretary of the Mike and Key Club; I will assist RCT to pursue great ideas while also getting things done and remaining consistent with the time-honored traditions of our Club.</p>

**Radio Club of Tacoma
Board of Directors Meeting Minutes
September 7, 2016**

Meeting called to order at 1900 PDT by President Gary WG7X.

Officers and Directors Present

President	Gary McAdams WG7X
Vice President	Mike Mikuchonis W7XTZ
Secretary	Mike Finnie W7MWF
Board	Alan Ferguson N7OMS
Board	Nick Winter K7MO
Board	Bruce Hanson WE7P
Board	Bob Jamison KE7WPK

Quorum A quorum was present. There were 15 member sign-ins on the attendance sheet, a copy of which is filed with these minutes.

Silent Key or Illness Condolences to Charlie AE7BM on the loss of his XYL

Approval of Minutes July 6, 2016 Board Meeting minutes were approved. There was no quorum at the August meeting.

Secretary's Report (W7MWF) Correspondence: Salmon Run pledges, utility bills, subscriptions and the rest of the usual stuff.

Treasurer's Report (W7XTZ) No report

Committee / Reports

Membership: George K7GRS reported that membership stands at 295.

Training: Next Technician Class October 8/9, 2016 followed by VE Session on October 11

Info Tech: Randy WB4SPB reported all systems operational. Also, Randy advised that George K7GRS had donated a computer for use by the library committee and patrons. This computer is upstairs in the library foyer and will be designated as the "Research Computer". Thanks to George!

Library: Computer donation noted above.

HF Operations: Gary WG7X and Bruce WE7P reported HF systems ready for Salmon Run. It was also noted that new rig interfaces have been configured and installed on the IC756P3 and the Yaesu 950, courtesy of Acme Labs KR7W. Thanks Rich

Repeater Ops: No report

Facilities Mgmt: Bruce WE7P reported on progress on garage repairs by Steve AF7YD. Bruce also advised that he believed he has isolated the problem with the alarm system and is performing test and evaluation. The presence of ants in the kitchen was brought up and will be addressed using chemical intervention.

Property Mgmt: Property disposition request carried over from last month was approved. A copy of the disposition list is filed with these minutes; Mike also reported on recent donations and advised that the club had received approval for participation in State Surplus program

Museum (KR7W): No report

Weds Activity Nite: Topic/activity TBD

General Mtg: Per W7UUU the presentation subject will be about Salmon Run
Unfinished Business

Nominating Committee: President Gary WG7X appointed Randy WB4SPB as chair. Randy will select 2 other qualified members to serve on committee. Several potential candidates for Officer and Board positions were identified as being interested in standing for election.

Centennial Planning: The October 16 Centennial Celebration will likely be an afternoon event and will be held at the Scottish Rite Temple on Vassault. We will have a guest speaker . Jim Pace, K7CEX, Northwestern Division is also making arrangements for special recognition for the Club from ARRL. Adam W2NCC has offered to develop our Special Event activity.

Tower Inspection: Nick K7MO submitted the report from Harrington Tower Services, and the gist of it is that the tower is in very good shape. Nick will spearhead taking care of issues that were identified as needing attention. Mr. Harrington's invoice was submitted in the amount of \$824.00 which is within the limits of the amount budgeted and will be paid.

New Business

BOD Resignation: Nick K7MO submitted his resignation from the Board due to work and personal conflicts that are preventing his active participation. President Gary WG7X appointed Bruce Cranefield WB7EC to fill the remainder of Nick's term, which expires December 31, 2016. Thank you Nick for your service and for your continued support.

Activity Reports and Discussion Topics

Salmon Run: All systems are GO

Century Club: Al N7OMS brought up the idea of having a "Century Club" fund raising drive in conjunction with our Centennial year. It would be a drive in which donors of \$100.00 or more will receive special recognition. The idea was generally well received and will be looked into in more detail.

Adjournment: The meeting was adjourned at 1955.

**Radio Club of Tacoma
General Membership Meeting Minutes
September 14, 2016**

Meeting called to order at 1930 PDT by President Gary WG7X at the Pierce County Library Administration Building.

Officers and Directors Present

President Gary McAdams WG7X
Vice President Mike Mikuchonis W7XTZ
Secretary Mike Finnie W7MWF
Treasurer Vacant
Board Bruce Cranefield WB7EC
Board Paul Matney W7PFU

Pledge of Allegiance led by Gary WG7X

Welcome -

Guests attending were Joe WD4KAV, Daniel KB7NNQ and Kim KB7MWG
Self-Introductions were undertaken and the Field Day Pig was passed around

Health and Welfare

Silent Keys Condolences to Charlie AE7BM on the loss of his wife. Charlie informed the club that this was the last meeting he would be attending as he is moving to Montana shortly.

President's Report (WG7X)

Resignation of Nick K7MO from BOD and appointment of Red WB7EC to fill remainder of term.

Nominating Committee appointed and will present their report later in the meeting.

Secretary's Report (W7MWF) Usual stuff, bank statements, subscriptions, utility bills, QSL Cards. Salmon Run pledges rolling in.

Committee / Activity Reports

Membership George K7GRS reported that membership stands at 295

VE Report John AC7WW presented the VE Report for the testing session held September 13. 21 Exams were graded by 8 Volunteer Examiners. A copy of John's report is filed with these minutes.

Nominating On behalf of the Nominating Committee, Randy WB4SPB advised the membership of the dates and requirements for the upcoming election. Randy also presented a proposed slate for the open positions:

For President:	Dave Ellison W7UUU
For Treasurer:	Steve Dightman AF7YD
For Board (2 positions open)	Red Cranefield WB7EC, Adam Barbera W2NCC and Phil Pia K7PIA

A copy of Randy's report is filed with these Minutes

Training – Next Tech Class October 8/9 followed by VE testing on October 11

HF Operations Gary WG7X reported that the HF equipment is all ready to go for Salmon Run this coming weekend (September 17/18)

Repeater Ops	No Report
Facilities Mgmt	No Report
Property Mgmt	No Report
Museum	No Report
Library	No Report

4th Weds Activity Night

Topic not yet identified - TBA

Program Dave W7UUU provided a presentation about The Washington State QSO Party, also known as Salmon Run! He gave a short overview of the event, when it starts and ends, what it's all about, and showed photos of several fun remote station locations from previous years, as well as photos of the mighty W7DK in action during the contest. Salmon Run is also W7DK's biggest fund raiser of the year so we want to make sure to get that message out there. Should be a fun presentation!

Unfinished Business and Announcements

Salmon Run coming up on September 17/18 2016

Centennial Pins and Patches (John AC7WW, Mike W7MKE and Red WB7EC)

Tower inspection completed and report submitted to Board.

Dave Brooks N7HT reported that he will be hosting a General Class License Prep soon. He may be contacted at 253-756-5146

Adam W2NCC submitted his proposal for a **W7DK Centennial Special Operating event**, to be held each weekend during October. Adam's ideas were well received by the members present. A copy of Adam's proposal is attached to these minutes.

Door Prize was won by Anne N7ANN, who also provided yummy refreshments for our evening gathering.

Raffle prize was won by Ron KC7CAW

Adjournment The meeting was adjourned at 2031 PDT

More Clubhouse News... With permission from the club managers– the W7OS Museum wrote a letter to the ARRL Contest Management to petition that the upcoming Field Day Rules be changed to add a Bonus Point category called: Boat Anchor QSOs.

Since W7OS likes Boat Anchor radios... why not set up a nice demonstration and make some QSOs at FD sites all over North America.

W7OS requested that a maximum of 200 points could be achieved by making 10 QSOs with Vacuum Tube radios– like Drake TR-3 or separate XMTR + RCVR Also a max of 100 points for 10 QSOs made with Hybrid rigs– like Yaesu FT-101 or Kenwood TS-520.

The ARRL noted that they received our proposal and will consider the rule change at their upcoming Field Day Rule meeting.



HINTS AND KINKS

CONSTRUCTION & INSTRUCTION
BY READER SUBMISSION



A Few Factoids about Ham Station Grounding

by KR7W

Prologue: The purpose of this article is to provide some food for thought regarding the **grounding** at your hamshack. The info presented intended to be 'basic' in nature and since every hamshack is different– the owner must figure out what will work best for their situation. There's not much lightning around Tacoma resulting in a tendency not to paying too much attention to proper ham shack GND'g (grounding). With that said... it is important for amateur radio operators to strive to have the best grounding possible to ensure the protection of life and property, i.e. your family, your home, and even your favorite radio equipment.



There are three possible kinds of GNDs at our ham radio stations:

1. **Power Line GND:** The third wire of the AC power cord that plugs into a properly wired three wire outlet. This GND is required by the **NEC** (National Electric Code) [unless your house is too old like mine]. This GND is effective for low frequency AC current (60 Hz, not RF frequencies). It is a given that we will not plug three wire AC plugs into outlets or power strips with no GNDing conductor. Normally no AC current flows in the GNDing (green wire) conductor. However, if a GND Fault (a short from the hot circuitry to the metal case) in your Astron Power Supply should occur– then the 120 Volt circuit breaker will blow to prevent shock and possibly a fire. [Side note: A 20 Amp circuit breaker will not blow to protect you from a lethal or near lethal electrical shock if one hand becomes the conductor between chassis GND (green wire) and the other hand touches 120 VAC hot (black) conductor inside of that Astron power supply. That'd be a bad scene.]
2. **Lightning GND:** If you have a tower or a metal antenna mast, the NEC requires connections to one or more GND Rods to hopefully dissipate hazardous energy from a lightning strike. Antenna feed line lightning arrestors will be connected to Lightning GND.
3. **RF GND:** A low impedance path for RF to reach the earth or another ground that dissipates, rather than radiates the RF energy.

In some cases the Lightning GND and RF GND are the same GND Rod(s).

Article 810 and 820 of the NEC (National Electrical Code) provides us with Communications Systems Installation Rules to follow to result in a safe and sound ham station installation. These NEC articles can be consulted to determine the minimum specifications needed.

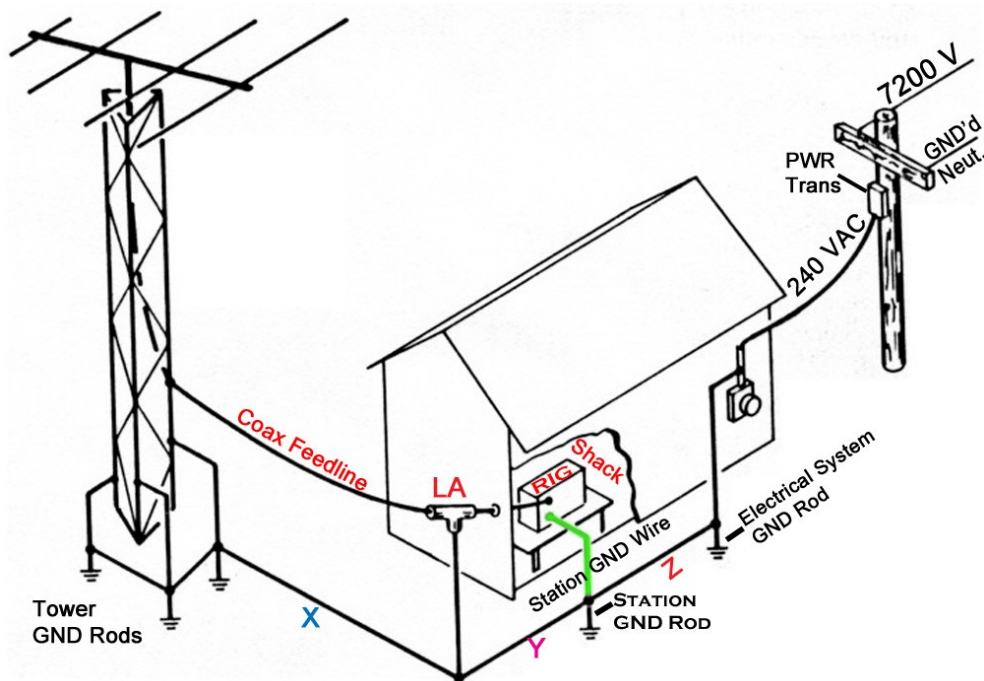
In Pierce County and surrounding communities AC Power Distribution (power lines down your street or alley) uses a 'Grounded Neutral' System. In Tacoma, the white insulator on the pole or cross-arm is the GND'd Neutral conductor of the 7200 volt distribution line and is connected to the GND wire at the pole-top or on-ground transformer that feeds the 240

VAC drop to your house. About every other pole the 7200 V neutral wire runs down the side of the pole to a buried ground wire— called a Pole Butt Ground. At your houses 240 VAC Power panel the GND'd Neut wire goes outside to one (old days) or two (modern times) GND Rods. All of the AC outlets THIRD wire in your house eventually get connected to panel GND or the GND'd Neutral inside of the Main AC Breaker Panel.

This drawing shows how grounds **should be** connected for the safest possible outcome.

Starting at the Tower. Each leg of the tower has its own GND Rod. Each tower leg is connected to its respective GND Rod with the proper sized conductor and connection method. Ideally the electrical connection is accomplished by Exothermic Welding.

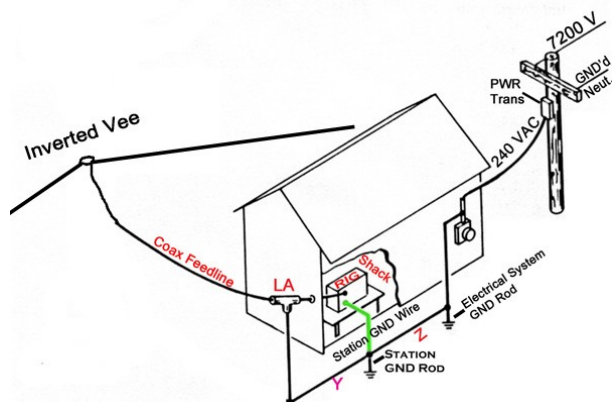
The coax feedline from the Yagi Antenna reaches the house where it is connected to LA, the lightning arrestor. The LA is supposed to divert a lightning strike to GND via the junction of conductors **X** and **Y**. The strike energy passes to GND via the tower and Station GND Rods. The NEC states that the antenna LA should be near the building on the outside or inside, but within 2 ft of the outside wall. The idea is to keep the strike energy out of the building.



The Station GND Rod, just outside of the hamshack is connected to the Tower GND Rods. Also, the Station GND Rod is connected to the House Electrical System GND Rod(s). **This is a very important connection!!** Most amateur radio operators do not realize that this connection is needed.

Why is the House GND Rod jumper needed? Imagine if it wasn't connected and lightning struck the 7200 VAC Power Line GND'd Neutral wires down the block or if a car hit a Transmission Power Line (114 KV or 220 KV) and the wire fell down on the 7200 VAC GND'd Neutral wires... then there would be a huge surge of voltage into Earth GND. Since the earth is a poor conductor— then a large voltage drop will be realized between the Power Company GND and your Station GND Rod. This difference of potential will be inside of your equipment via the Third Conductor Power Line GND and between the Station GND and will most likely blow up your IC-7600, FT-1200DX, K3S, Flex 6700, etc.

Let's say that you do not have a tower with a Yagi nor the GND Rods that go with it... But you do have a coax fed inverted Vee antenna up a tall fir tree. The NEC states that the



coaxial LA needs to be in this circuit. In this case, the LA can be GND'd to the Station Gnd Rod... or if the Inv Vee LA is a ways away... then a GND Rod must be installed close by and the LA connected there. Note that the LA GND Rod must be connected to the Station GND Rod and the Electrical System GND Rod.

Let's go inside of your shack... Fig 4 shows each piece of equipment connected to the Station GND Buss- this method ensures that each device is at the same potential, which

should be Zero volts. A lot of hams expect their antenna tuner to be GND'd because it connects to the IC-7600 via the coax connector. Same for the Antenna Coax being GND'd via the coax jumper. What if the coax jumper between the radio and the tuner were corroded? There'd be a possible high Z (impedance) open circuit. If lightning struck the feedline coax then there would be a difference of potential between the antenna tuner and the radio. Difference of potential results in big volts which could take out the electronics in the radio. When all devices are connected to the common GND Buss there is always a very low Z path.

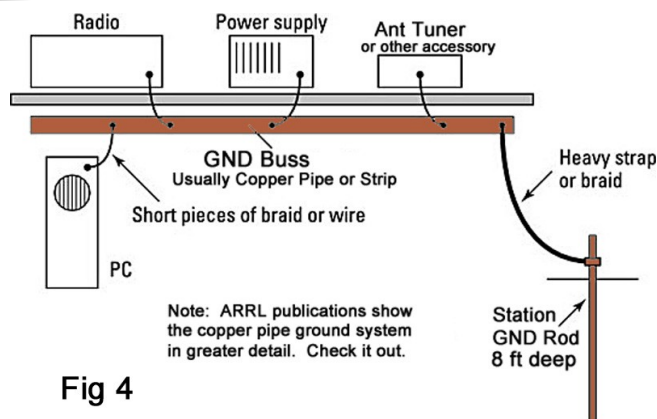
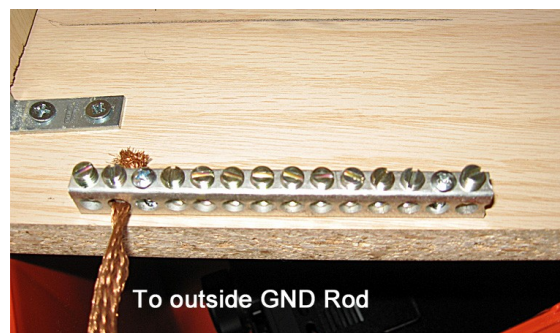


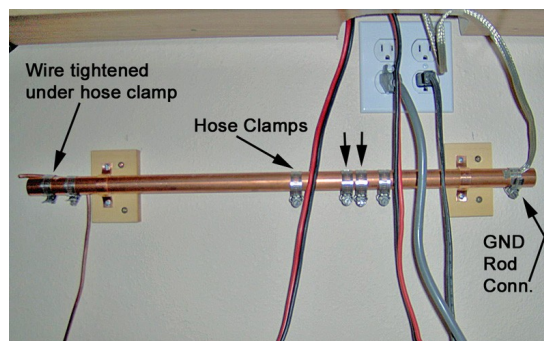
Fig 4

If there is unwanted Common Mode RF (on outside of coax when you transmit) in your shack, and if all of the devices are NOT connected to the GND Buss, again there could be a difference of potential between the devices. These devices can re-radiate RF energy and could get into your PC or your RigBlaster PC to Radio interface and cause the electronics to misbehave. There's also a chance of getting a RF Burn. Food for thought.

Stayed tune for Next Month for Koyaanisqatsi- Feedline out of balance (aka Common Mode Current is not your friend). 73 30 SK KR7W CL

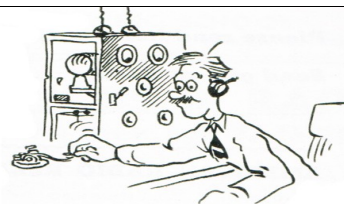


Electrical Service Panel GND connection bar as station BND Buss.



1/2" Copper Pipe GND Buss and small Radiator style hose clamps .

76 YEARS AGO IN HAM RADIO



July of 1940, about 16 months before Pres. FDR entered the USA into WW2... Hallicrafters- a big time amateur radio manufacturer (big like Icom or Yaesu is today) announced their latest and greatest shortwave receiver- the SX-28.

Back in 1940 **Amplitude Modulation** was the "king" mode of amateur radio voice communications. This receiver was equipped with a great noise blanker and very effective variable bandwidth filtering for eliminating noise and adjacent interfering stations. These features were touted as revolutionary.

To promote the good sounding voice quality the SX-28 has push-pull hi-fi audio circuitry. An option for this receiver is the 12 inch reflex speaker system- half the size of a refrigerator. More modest operators would use the 8 inch table top speaker. AM ham operators never

WORLD'S LARGEST BUILDERS OF AMATEUR COMMUNICATIONS EQUIPMENT

The SKYRIDER "28"



SETS A NEW HIGH IN
QUALITY PERFORMANCE

15 tubes. Two stages preselection. Calibrated bandspread inertia controlled. Micrometer scale tuning inertia controlled. Tone and AC on-off. Beat Frequency Oscillator. AF gain. RF gain. Crystal phasing. Adjustable noise limiter. Send-receive switch. AVC-BFO switch. Bass boost switch. Phono jack. 80/40/20/10 meter amateur bands calibrated. Wide angle "S" meter. Band pass audio filter. Improved signal to image and noise ratio. Push-pull high fidelity audio output. 6-step wide range variable selectivity. Improved headphone output.

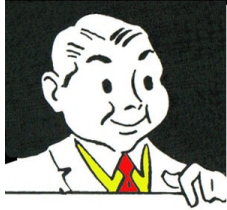
Frequency range; 550 to 1610 kc., 1.5 to 3.05 mc., 2.9 to 5.86 mc., 5.75 to 11.5 mc., 10.4 to 21 mc., 20.7 to 42 mc. The Model SX-28 Receiver with crystal and tubes, less speaker. Net **\$179.50**. Hallicrafters Jensen bass-reflex enclosure including 12" speaker 30" high, 16" deep, 22 1/2" wide, Model R12 \$34.50. Hallicrafters Jensen bass-reflex enclosure 8" speaker, 23 1/2" high, 1 1/4" deep, 17 1/2" wide. Model R8 \$29.95. Shipping weight 87 lbs.

\$179.50

the hallicrafters co.

sounded better back in the day. The W7OS Museum has three SX-28 in their collection. This month Museum Regulars Chuck AC7QN and Rich KR7W will begin restoration of the nicest one. The remaining radios will be organ donors. Stop by the Museum on any Saturday and contribute to the effort as a **kibitzer** [click LINK].

Fun Factoids: In 1942 this radio cost \$180. This equates to \$2660, a 1378 percent increase, in 2016 dollars. The SX-28 weighs in at 87 pounds.



THE LOGGER'S BARK PHOTO PAGE



PAGE 1



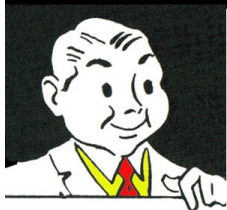
Continued from Page 1... Here's Bud K7BUD at the W7DK/100 Centennial station working the Pile Up.



Radio Club of Tacoma officers got together to operate in the club's one year old QSO party... about 100 years ago.



Larry KD4VOM at the Oct 12 club meeting giving KUDOS to ARES volunteers N7JAJ Armin Keen, Peter Baker AD7EU, and Linda Adams AB7YL for their participation in the Cascadia exercise.



THE LOGGER'S BARK PHOTO PAGE



Sunday Oct 17, RCT Centennial Birthday Party, Scottish Rites Temple, Tacoma WA... Photos courtesy of Dave W7UUU.

PAGE 2



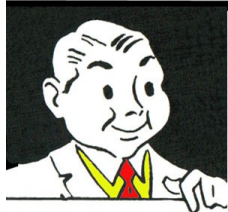
Fish-Eye view of the party room. A lot of members and former members turned out. Folks were encouraged to take the microphone and give testimony of some of their ham radio experiences with the club.



Above: Worth W7WG the club's oldest member, licensed in 1935, was honored by cutting the first slice of celebratory cake. Co-Host Ann N7ANN assists.



Right: ARRL's Northwestern Director Jim Pace K7CEX presents a plaque to the club honoring our 100 years. Prez Gary on the left. Also attending was ARRL NW Vice Director Bonnie Altus AB7ZQ.



THE LOGGER'S BARK PHOTO PAGE



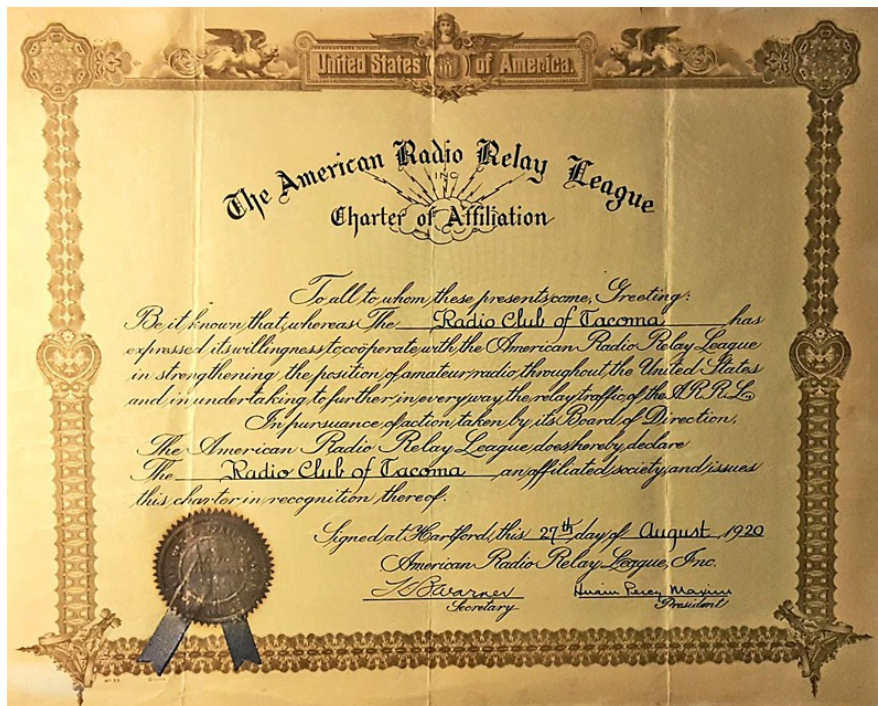
Sunday Oct 17, RCT Centennial Birthday Party, Scottish Rites Temple, Tacoma WA... Photos courtesy of Dave W7UUU.

PAGE 3

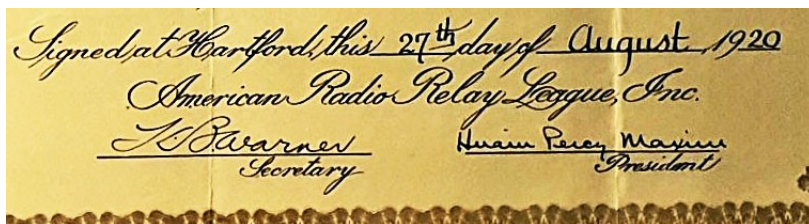
-The Charter-

This document was issued to our club on Aug 27, 1920. It affiliates RCT with the ARRL to be willing to cooperate with the ARRL in strengthening the position of amateur radio through out the United States... and further in every way the Relay Traffic of the ARRL.

Doug Oakman AD7AV, the club's Librarian discovered the original charter folded in a collection of old club documents that were stashed away in former club SEC Larry KD4VOM's secure storage building. This is considered a HUGE find



because it is so well preserved. The club had the document framed in museum quality materials and it is to be placed in a prominent place at the club house. Thanks to Lib. Doug AD7AV, Dave W7UUU, Larry KD4VOM, and Al N7OMS for restoring this important piece of the club's history.



Check out the signature line- The Old Man, Hiram Percy Maxim's pen.

Note that as more photos are processed... they will appear on the club's website: www.w7dk.org [LINK]

A tip of the Bark hat to Dave W7UUU and Ann N7ANN for arranging and hosting a very nice Birthday Party for our club.

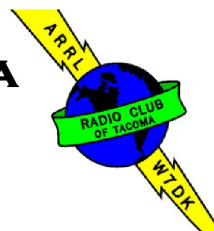




RADIO CLUB OF TACOMA

1916 - 2016

100 YEARS OF SERVICE



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RADIO CLUB REPEATERS

Central Tacoma: 147.280 + PL=103.5

Crawford Mountain 147.380 + PL=103.5 (E of Olympia @ 1500 ft ASL)

Central Tacoma: 440.625 + PL=103.5

North Tacoma: 145.21 - PL=141.3

www.w7dk.org [LINK] - For the latest and most current information on events and activities, visit the Radio Club of Tacoma Website.